GUIDANCE NOTE FOR MANUFACTURERS OF CUSTOM-MADE MEDICAL DEVICES

Foreword

This guidance document is informative and advisory and has no legal authority. Individual national enforcement authorities are bound by their own legislation and can only apply this guidance within their confines.

Only the text of the Directives is authentic in law. The text of the Directives is applicable where there are differences between the provisions of the Directives and the contents of this guide. The interpretation of Community law is ultimately the responsibility and the privilege of the European Court of Justice (ECJ). Any legal analysis set out in this guide does not in any way preclude a different interpretation by the ECJ in a particular case, and does not in any way commit the European Commission.

The scope of this guidance document is custom-made medical devices and custom-made active implantable medical devices only (hereafter referred to in this document as custom-made medical devices).

Any references in this document to the Directives, includes any amendments by 2007/47/EC.

Introduction

A manufacturer of a custom-made medical device, who places devices on the European market under his own name, must meet the requirements of national legislation, which transposes the Medical Devices Directive 93/42/EEC (MDD).

A manufacturer of a custom-made active implantable medical device, who places devices on the European market under his own name, must meet the requirements of national legislation, which transposes the Active Implantable Medical Devices Directive, 90/385/EEC (AIMDD).

Custom-made medical devices must comply with the relevant essential requirements established in Annex I of the MDD or Annex 1 of the AIMDD as applicable to ensure that they do not compromise the health and safety of patients, users and any other persons. Whenever this is impossible, the manufacturer must indicate which of the essential requirements has not been fully met.

Manufacturers of custom-made medical devices shall follow the procedure referred to in Annex VIII of the MDD or Annex 6 of the AIMDD as applicable and draw up the statement for special purposes before placing them on the market.

Scope

This guidance document deals specifically with custom-made medical devices as defined in the MDD and the AIMDD. The scope of this guidance document is to provide general guidance for manufacturers of custom-made medical devices in order meet the requirements of the Directives.

In relation to manufacturers who do not have a registered place of business in the European Community, article 14 of the MDD & article 10a of the AIMDD requires the manufacturer to designate an authorised representative to be their legal representative within the Community.

Definitions

Active implantable medical device - Any active medical device which is intended to be totally or partially introduced, surgically or medically, into the human body or by medical intervention into a natural orifice, and which is intended to remain after the procedure. *(Ref.: AIMDD; Article 1 (2) (c))*

Active medical device - Any medical device relying for its functioning on a source of electrical energy or any source of power other than that directly generated by the human body or gravity. *(Ref.: AIMDD; Article 1 (2) (b))*

Authorised representative – Any natural or legal person established in the Community who, explicitly designated by the manufacturer, acts and may be addressed by authorities and bodies in the Community instead of the manufacturer with regard to the latter's obligations under the Directive. *(Ref.: MDD; Article 1 (2) (j) & AIMDD Article 1 (2)(j))*

Conformity Assessment – The process to verify the conformity of a medical device with the essential requirements.

Custom-made manufacturer – The natural or legal person who undertakes the design of the product and manufactures the device to a predefined specification (i.e. a prescription).

Custom-made medical device - Any device specifically made in accordance with a duly qualified medical practitioner's written prescription which gives, under his responsibility, specific design characteristics and is intended for the sole use of a particular patient.

The above mentioned prescription may also be made out by any other person authorized by virtue of his professional qualifications to do so. Mass-produced devices which need to be adapted to meet the specific requirements of the medical practitioner or any other professional user shall not be considered to be custom-made devices. *(Ref.: MDD Article 1 (2) (d) & AIMDD Article 1 (2) (d))*

Manufacturer – The natural or legal person with responsibility for the design, manufacture, packaging and labelling of a device before it is placed on the market under his own name, regardless of whether these operations are carried out by that person himself or on his behalf by a third party. The obligations of the Directives to be met by manufacturers also apply to the natural or legal person who assembles, package, processes, fully refurbishes and / or labels one or more ready-made products and/or assigns to them their intended purpose as a device with a view to their being placed on the market under his own name. This sub-paragraph does not apply to the person who, while not a manufacturer within the meaning of the first sub-paragraph, assembles or adapts devices already on the market to their intended purpose for an individual patient. *(Ref.: MDD Article 1 (2) (f) & AIMDD Article 1 (2)(i))*

Medical device – Any instrument, apparatus, appliance, software, material or other article, whether used alone or in combination, including the software intended by the manufacturer to be used specifically for diagnostic and/or therapeutic purposes and necessary for its proper application, intended by the manufacturer to be used for human beings for the purpose of:

- diagnosis, prevention, monitoring, treatment or alleviation of disease,
- diagnosis, monitoring, treatment, alleviation of or compensation for an injury or handicap,
- investigation, replacement or modification of the anatomy or of a physiological process,
- control of conception,

and which does not achieve its principal intended action in or on the human body by pharmacological, immunological or metabolic means, but which may be assisted in its function by such means. (*Ref.: MDD Article 1 (2) (a) & AIMDD Article 1 (2)(a))*

Risk – Combination of the probability of occurrence of harm and the severity of that harm.

Risk management – Systematic application of management policies, procedures and practices to the tasks of analysing, evaluating and controlling risk. (*Ref.: MDD, Annex 1, paragraph 2 & AIMDD, Annex 1, paragraph 1)*

Placing on the Market of Custom-Made Medical Devices - The Necessary Steps

Manufacturers that intend to place custom-made medical devices on the market should follow the procedures mentioned below which are also summarised in the attached flowchart (Annex II).

Step 1 – Confirm product is a medical device

Manufacturers must confirm if the product is in compliance with the medical device definition according to is principal intended use and mode of action.

The European Commission MEDDEV 2.1/1 and 2.1/3 Rev 2 should be consulted.

Step 2 – Confirm product is a custom-made medical device

The definition of custom-made medical devices is divided into two parts. The first part considers the needs of the patient and the second the needs of the professional user.

In the first part it states that a custom-made medical device is a device that is manufactured specifically in accordance with a written prescription of a duly qualified medical practitioner who gives, under his responsibility, specific characteristics as to its design, and that it is intended for the sole use of a particular patient.

The prescription mentioned above may result in a

- totally new design
- device constructed directly from raw materials or device constructed from a commercially available product by customising the existing device for a particular patient, for purposes not outlined in the manufacturer's instructions for use.

In all cases the device shall be treated as a custom-made medical device and be evaluated as such before it is put into service.

The device must be for the sole use of a particular patient to meet the definition of a custom-made medical device.

On the other hand, devices intended by their manufacturers to be assembled, installed, adjusted or fine tuned before being put into use are not to be treated as custom-made devices. Examples are adapting optical glasses to a frame, adjusting the length of elbow crutches or creating a dental filling using CE marked filling materials.

The second part of the definition states that mass produced devices which need to be adapted to meet the *specific requirements of the medical practitioner or any other professional user* shall not be considered to be custom-made medical devices. Examples may include adaptation of surgical instruments or patient support systems used for examination.

Custom-made medical devices (such as dental appliances, prosthesis, orthoses and hearing-aid inserts) are in most cases one-off devices prescribed for the exclusive use of a particular patient. Intermediate products specifically intended for manufacture of custom-made devices may also be considered as medical devices. This applies essentially to dental alloys, dental ceramics, modular components for prosthesis, if the intended purpose of such products is specifically related to medical devices.

Step 3 - Procedures before the placing on the market

Custom-made medical device manufacturers should guarantee that specific characteristics of their custom-made medical devices are in accordance with all the applicable requirements of the Directives and related relevant harmonised standards.

Manufacturers of custom-made medical devices must consider the following steps, with reference to the essential requirements described in Annex I, and to Annex VIII of the MDD.

Manufacturers of active implantable medical devices that meet the definition of a custom made device must also consider the following steps, with reference to the essential requirements described in Annex 1, and Annex 6 of the AIMDD.

Step 3a – Meet the essential requirements

Manufacturers of custom-made medical devices shall meet the essential requirements as listed in Annex I of the MDD or Annex 1 of the AIMDD as applicable.

Such essential requirements cover amongst others:

- handling and packaging of devices;
- materials choice (e.g. with regard to toxicity, when there is patient contact, CE marked materials should be used or the manufacturer must guarantee the suitability of the materials by other means);
- manufacturing under controlled conditions;
- cleanliness and cross infection control;
- protection against radiation;
- requirements for medical devices connected to or equipped with an energy source;
- information to be supplied by the manufacturer

Where a relevant hazard exists, custom-made devices which are also machinery within the meaning of Article 2(a) of Directive 2006/42/EC, shall also meet the essential health and safety requirements set out in Annex I of that Directive to the extent to which those essential health and safety requirements are more specific than the essential requirements set out in Annex I of MDD or Annex 1 of AIMDD. *(Ref AIMDD/MDD Article 3 and the Interpretative document of the European Commission on the relation between MDD/AIMDD and directive 2006/42/EC on machinery).*

Where a custom made device covered by MDD is intended by the manufacturer to be used also in accordance with the provisions on personal protective equipment in Council Directive 89/686/EEC, the relevant basic health and safety requirements of Directive 89/686/EEC shall also be fulfilled.
The conformity shall be assessed in accordance with the procedures specified in MDD and 89/686/EEC respectively. *(Ref MDD Article 1.6 and the Interpretative document of the European Commission on the relation between MDD and directive 89/686/EC on personal protective equipment).*

Step 3b – Prepare technical documentation

To comply with the Directives, manufacturers of custom-made medical devices, or their designated authorised representatives, must follow the procedures referred to in Annex VIII, Point 3.1 of the MDD or Annex 6, Point 3.1 of the AIMDD as applicable.

This procedure includes preparing technical documentation indicating manufacturing sites and allowing an understanding of the design and manufacturing process, including the expected performance of the product, so as to allow assessment of conformity of the product with the requirements of the Directives.

The manufacturer must take all the necessary measures to ensure that the manufacturing process is in accordance with the technical documentation.

The technical documentation prepared should be appropriate to the complexity of the particular custom-made medical device.

The technical documentation, which should be prepared for custom-made medical devices typically includes:

Design, manufacturing and product performance records, which may consist of:

1. Name, trademark and category of the device, if applicable;`
2. Details of manufacturing site(s)
3. General description of the product, including any variant;
4. Rational for classification;
5. Indication if it is a sterile device;
6. If the device incorporates a medicinal product, an animal tissue or a human blood stable derivative documentation relating to these aspects;
7. Intended use, indications for use and contra-indications references if the device is to be connected to other devices in order to operate as intended;
8. Design drawings and specifications of the device, where applicable;
9. Specifications of the raw material, components, intermediate products / sub-assembles and final product;
10. Manufacturing methods;
11. Packaging specifications;
12. If it is a sterile device, description of the methods used and the standards applied;
13. Validation data in form of a reference to similar processes of serial produced devices;
14. Personnel's qualification data;
15. Design verification and quality control procedures;
16. Equipment used to monitor and control the raw materials, components and the final product, where applicable;
17. List of the standards referred to in article 5 of the MDD or article 5 of the AIMDD as applicable, applied in full or in part, and descriptions of the adopted solutions to meet the essential requirements of the Directives if the standards referred to in article 5 have not been applied;
18. Results of risk management per product family;
19. Biocompatibility tests, if applicable;
20. Clinical evaluation in accordance with Annex X of the MDD or Annex 7 of the AIMDD as applicable;
21. If the device incorporates software the software must be validated according to the generally accepted state of the art, taking into account the principles of development lifecycle, risk management, validation and verification.
22. Labelling and the instructions for use.
23. Name and the address of the subcontractors, if applicable;

24. Procedures to ensure a review of the qualified persons written prescription in order to ensure that adequate information has been supplied and to document the manufacturing requirements;
25. Procedures allowing verification that the final product had been reviewed against the prescription, prior to placing the products on the market;
26. Procedures which guarantee the traceability from the manufacturer, through the practitioner to the patient.

Step 3c– Risk management

Custom-made devices must be designed and manufactured in such a way that, when used under the conditions and for the purposes intended, they will not compromise the clinical condition or the safety of patients, or the safety and health of users.

The use of a medical device entails some degree of risk. To ensure that any risks associated with the use of the custom made devices constitute acceptable risks when weighed against the benefits to the patient and are compatible with a high level of protection of health and safety, manufacturers shall establish and maintain a process, as outlined in Annex I of the MDD or Annex 1 of the AIMDD as applicable, for identifying hazards associated with their custom-made medical device, estimating and evaluating the associated risks, controlling these risks and monitoring the effectiveness of that control.

This process shall be documented as part of the technical documentation and should include the following elements:

- risk analysis (intended use identification, hazards identification, risk estimation);
- risk evaluation (risk acceptability decisions);
- risk control (protective measures for reducing risks to specified levels);
- post-production information (post-production experience and review of risk management experience).

The risk management may be based on ISO 14971 and be appropriate to the complexity and risk of the device.

Step 3d – Prepare instructions for use and labelling

As per point 13 of Annex I of the MDD, each device must be accompanied by the information needed to use it safely and to identify the manufacturer, taking account of the training and knowledge of the potential users, and to identify the manufacturer. This information comprises the label and the data in the instructions for use. In relation to custom-made medical devices, these instructions may be incorporated into the statement document referred to in step 4 below.

The minimum requirements regarding the labelling of a custom-made device should include:

- the name or trade name and address of the manufacturer. In addition, for devices imported into the European Community the name and address of the authorised representative where the manufacturer does not have a registered place of business in the Community; *(Ref.: MDD; Annex I.II 13.3(a))*

- the details strictly necessary for the professional to identify the device and the contents of the packaging (e.g. patient name/description); *(Ref.: MDD; Annex I.II 13.3(b))*

- the words “custom-made device”; *(Ref.: MDD; Annex I.II 13.3(g))*

Other key requirements include:

- if appropriate, any special storage and/or handling conditions; *(Ref.: MDD; Annex I.II 13.3(i))*
- if appropriate, any warnings and/or precautions to take. *(Ref.: MDD; Annex I.II 13.3(k))*
- if appropriate, an indication that the device is for single use *(Ref.: MDD; Annex I.II 13.3(f))*

With regard to custom-made active implantable devices, point 14 of Annex I of the AIMDD, details the particulars that each device must bear legibly and indelibly.

Point 14.1 of Annex 1 of the AIMDD details the particulars to be included on the sterile pack & point 14.2 of Annex 1 of the AIMDD details the particulars to be included on sales packaging.

Each device placed on the market, must be accompanied by instructions for use. Point 15 of Annex 1 of the AIMDD details the particulars to be included on the instructions for use.

For custom made active implantable devices the sterile pack, sales packaging & instructions for use must contain the words “custom-made device”;

Note: All the specified information in step 3 above should be kept for a period of not less than five years from the date of placing on the market of the custom-made medical device. In the case of implantable device the period shall be fifteen years.

Step 4 – Draw up a statement concerning custom-made devices

As per point 2 of Annex VIII of the MDD / Annex 6 of the AIMDD, manufacturers, or their authorised representatives, of custom-made medical devices must draw up a statement for each custom-made device. The statement must contain the following information:

- The name and address of the manufacturer
- Data allowing identification of the device in question, i.e. description, serial number, order number, generic name.
- A statement that the device is intended for exclusive use by a particular patient together with the name of the patient (this may be an identification number if patient confidentiality needs to be maintained, provided it can be traced through records to the patient name).
- The name of the medical practitioner or other authorised person who made the prescription and, where applicable, the name of the clinical concerned,
- The specific characteristics of the product as indicated by the prescription,
- A statement that the device conforms to the essential requirements set out in Annex I of the MDD or Annex 1 of the AIMDD as applicable, and where applicable, indicating which essential requirements have not been fully met, together with the grounds.

This statement must be signed by the manufacturer / authorised representative.

Article 4 of the MDD states that custom-made devices that fall into class IIa, IIb and III shall be accompanied by the statement referred to above. Article 4 of the AIMDD states that all custom-made active implantable devices shall be accompanied by this statement. This statement must follow the

device to the prescriber/purchaser and be available to the particular patient identified by name, an acronym or a numerical code.

Step 5 – Notify the Competent Authorities

Manufacturers of custom-made medical devices, or their designated authorised representative, must notify the Competent Authority in the Member State where they have a registered place of business, and provide a description of the devices concerned and the business address. A list of Competent Authority contact points can be found on the EU Commission website at http://ec.europa.eu/consumers/sectors/medical-devices/links/index_en.htm. Manufacturers / authorised representatives should contact their relevant Competent Authority with regards the procedures and forms required for such notifications and whether or not a fee will apply.

Member states may require that the manufacturer submit to the relevant competent authority a list of the devices which have been put into service in their territory.

Step 6 – Incident reporting

The manufacturer or his authorised representative is responsible for activating a vigilance system and informing the surveillance authority about incidents that invoke it (according to Paragraph 5, Annex VIII of the MDD or Paragraph 5, Annex 6 of the AIMDD). After notification, the manufacturer is obliged to make investigations, compile and send a report to the surveillance authority, and consider, in collaboration with the authority, what action should be taken. Manufacturers who do not have a registered place of business in the EU must designate an authorised representative based in the EU who may act as the legal representative of the manufacturer.

The European Commission MEDDEV 2.12/1 Rev 6 should be consulted.

Step 7 – Review experience gained from post-market surveillance

The manufacturer shall put in place and keep updated a procedure to review experience gained from devices on the market and to implement necessary corrective action taking account of the nature and risks in relation to the product.

NOTE 1: The role of Competent Authority

The Competent Authority has the authority to check control systems to ensure conformity with Annex VIII of the MDD or Annex 6 of the AIMDD as applicable.

NOTE 2: CE marking

Custom-made devices shall not be CE marked as specified in article 17 of the MDD / article 12 of the AIMDD. However manufacturers of custom-made devices must meet the essential requirements outlined in Annex I of the MDD or Annex 1 of the AIMDD as applicable.

NOTE 3: Notified Body Intervention

No Notified Body intervention is required for custom-made medical devices.

Annex I: Further Information

Information for manufacturers of custom-made medical devices can be found in the following sources:

- Medical Device Directive, MDD, 93/42/EEC of 14 June 1993. OJ L 169, 12.7.1993, p. 1, as last amended by Directive 2007/47/EC of 5 September 2007 OJ L 247, 21.9.2007, p.1.

- Active Implantable Medical Device Directive, AIMDD, 90/385/EEC of 20 June 1990. OJ L 169, 12.7.1993, p. 1, as last amended by Directive 2007/47/EC of 5 September 2007 OJ L 247, 21.9.2007, p.1.

- Guideline for definitions of “medical devices”, “accessory” and “manufacturer”: “Guidelines related to the application of: the Council Directive 90/385/EEC on Active Implantable Medical Devices, the Council Directive 93/42/EEC on Medical Devices”, MEDDEV 2.1/1 April 1994.

- Guideline for classification: “Guideline for the classification of medical devices”, MEDDEV 2.4/1, Rev 8, July 2001.

- Guidelines that explain the demarcation with other European Directives – medical devices/medicinal products: “Guidelines relating to the application of: the Council Directive 90/385/EEC on active implantable Medical Devices; the Council Directive 93/42/EEC on medical devices”, MEDDEV 2.1/3, Rev 2, July 2001.

- Guidelines for incident reporting: “Guidelines on a Medical Devices Vigilance System” MEDDEV 2.12/1 Rev 6

- Interpretation of the relation between the revised Directives 90/385/EEC and 93/42/EEC concerning (active implantable) medical devices and Directive 2006/42/EC on machinery

- Interpretation of the relation between the revised Directive 93/42/EEC concerning medical devices and Directive 89/686/EEC on personal protective equipment

- National authorities web sites

- European Commission's web site.

Annex II – Guidance Flowchart for Manufacturers of Custom-Made Medical Devices